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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,322	02/06/2004	Cheng-Chieh Liu	0941-0911P	6485
2292	7590	12/23/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PA

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/772,322	LIU ET AL.	
	Examiner Dang D. Le	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 05 October 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 2/6/04 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                     | Paper No(s)/Mail Date. _____ .  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____ .                                  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 10/5/05 have been fully considered but they are not persuasive.

Regarding the Shirotori reference, the chassis is component 1 in Figure 2 while the container is the resin body 7 with the slot 1b for the sensor 6.

Regarding the Horiuchi et al. reference, the container is the heat sink 56 mounted on the housing 45 for FETS 55, which function as motor controller. Horiuchi et al. does not use the container for Hall element 20.

As a result, the rejection is still deemed proper and repeated hereinafter.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "container directly mounted on and protruding from the stator" in claim 17 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. The drawings only show the container directly mounted on and protruding from the chassis (because of Pillars 42). Figure 4 shows the pillars 42 protruding from the stator.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, it is not clear how the container is mounted directly on the stator and also protrudes from the stator. Figure 4 shows only the pillars 42 protrude from the stator. Figure 4 shows the container being mounted directly and protruding from the chassis (or cover) with the pillars protruding from the stator and the container being adhered to the stator. Should "the stator" at line 6 be changed to -- the chassis -- ? Other claims are dependent.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 17, 18, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Horiuchi et al. (5,969,445).

Regarding claim 17, Horiuchi et al. shows a heat-dissipating device, comprising:

- a chassis (46);
- a stator (12) disposed on the chassis (46 through 13);
- a rotor (5) surrounding the stator and coupled to the stator;
- a motor controller (FETS 55 to control the current) driving and controlling the heat-dissipating device; and
- a container (56) directly mounted on and protruding from (with cooling fins on top) the stator (including the chassis 46 and structure 13) and having a slot to secure the motor controller (55).

Regarding claims 18, 21, and 22, it is noted that Horng also shows all of the limitations of the claimed invention.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirotori (4,818,907) in view of Horng (6,462,443) and further in view of Muller (4,554,473).

Regarding claim 1, Shirotori shows a container (7) for mounting a sensor (6) for a spindle motor having a chassis (1), said container comprising a main body (Figure 1) directly mounting on the chassis (1) of the motor and having a slot (1b) to receive the motor sensor (6).

Shirotori does not show the motor being a heat-dissipating device and the sensor being the motor controller.

Horng shows that the sensor (3) can be made with the integrated circuit for the purpose of reducing components.

Muller teaches that the spindle motor can be made as a heat-dissipating device (Figures 1 and 2) for the purpose of reducing heat.

Since Shirotori, Horng, and Muller are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the sensor as a motor controller and to make the motor as a heat-dissipating device as respectively taught by Horng and Muller for the purposes discussed above.

Regarding claims 2, 3, and 7, it is noted that Horng also shows all of the limitations of the claimed invention.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirotori in view of Horng and Muller as claimed in claim 1 above, and further in view of Doemen et al. (4,482,849).

Regarding claim 4, the motor of Shirotori modified by Horng and Muller includes all of the limitations of the claimed invention except for the hook.

Doemen et al. shows the hook (179, 180) for the purpose of mounting the container easily.

Since Shirotori, Horng, Muller, and Doemen et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include hooks as taught by Doemen et al. for the purpose discussed above.

Regarding claims 5 and 6, it is noted that Doemen et al. also shows all of the limitations of the claimed invention including the pillars (56).

11. Claims 8-10, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoover et al. (4,910,420) in view of Horiuchi et al. (5,969,445).

Regarding claim 8, Hoover shows a heat-dissipating device (Figure 2), comprising:

- a chassis (80);
- a stator (72) disposed on the chassis;
- a rotor (54) surrounding the stator and coupled to the stator;
- a motor controller (108) driving and controlling the heat-dissipating device.

Hoover et al. does not show a container directly mounted on the chassis and having a slot to receive the motor controller.

Horiuchi et al. shows a container (56 in housing 45) directly mounted on the chassis (46) and having a slot to receive the switching device for the purpose of reducing heat.

Since Hoover et al. and Horiuchi et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include a container as taught by Horiuchi al. for the purpose discussed above.

Regarding claims 9, 10, 14, and 15, it is noted that Horiuchi et al. also shows all of the limitations of the claimed invention.

12. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoover et al. in view of Horiuchi et al. and further in view of Doemen et al.

Regarding claim 11, the motor of Hoover modified by Horiuchi et al. includes all of the limitations of the claimed invention except for the hole and the hooks.

Doemen et al. shows hooks (179, 180) and holes for the purpose of mounting the container easily.

Since Hoover et al., Horiuchi et al., and Doemen et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include hooks and holes as taught by Doemen et al. for the purpose discussed above.

Regarding claims 12 and 13, it is noted that Doemen et al. also shows all of the limitations of the claimed invention.

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoover et al. in view of Horiuchi et al. and further in view of Horng.

Regarding claim 16, the motor of Hoover modified by Horiuchi et al. includes all of the limitations of the claimed invention except for the motor controller being an integrated circuit.

Horng et al. shows the motor controller (3) being an integrated circuit with the Hall sensor for the purpose of reducing parts.

Since Hoover et al., Horiuchi et al., and Horng et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the sensor with the controller as taught by Horng for the purpose discussed above.

14. Claims 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. in view of Doemen et al. (4,482,849).

Regarding claims 19 and 20, Horiuchi et al. shows all of the limitations of the claimed invention except for the positioning pillars having U-shaped cross section.

Doemen et al. shows the positioning pillars (56) having U-shaped cross section for the purpose of making easily connection.

Since Horiuchi et al. and Doemen et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the positioning pillars having U-shaped cross section as taught by Doemen et al. for the purpose discussed above.

15. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. in view of Horng (6,462,443).

Regarding claim 23, Horiuchi et al. shows all of the limitations of the claimed invention except for the motor controller being an integrated circuit to control the heat-dissipating device and detect the phase change of magnetic poles of the stator.

Horn shows the motor controller (3) being an integrated circuit to control the heat-dissipating device and detect the phase change of magnetic poles of the stator for the purpose of reducing parts.

Since Horiuchi et al. and Horn are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to include the sensor with the controller as taught by Horn for the purpose discussed above.

### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Information on How to Contact USPTO***

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/20/05



DANG LE  
PRIMARY EXAMINER